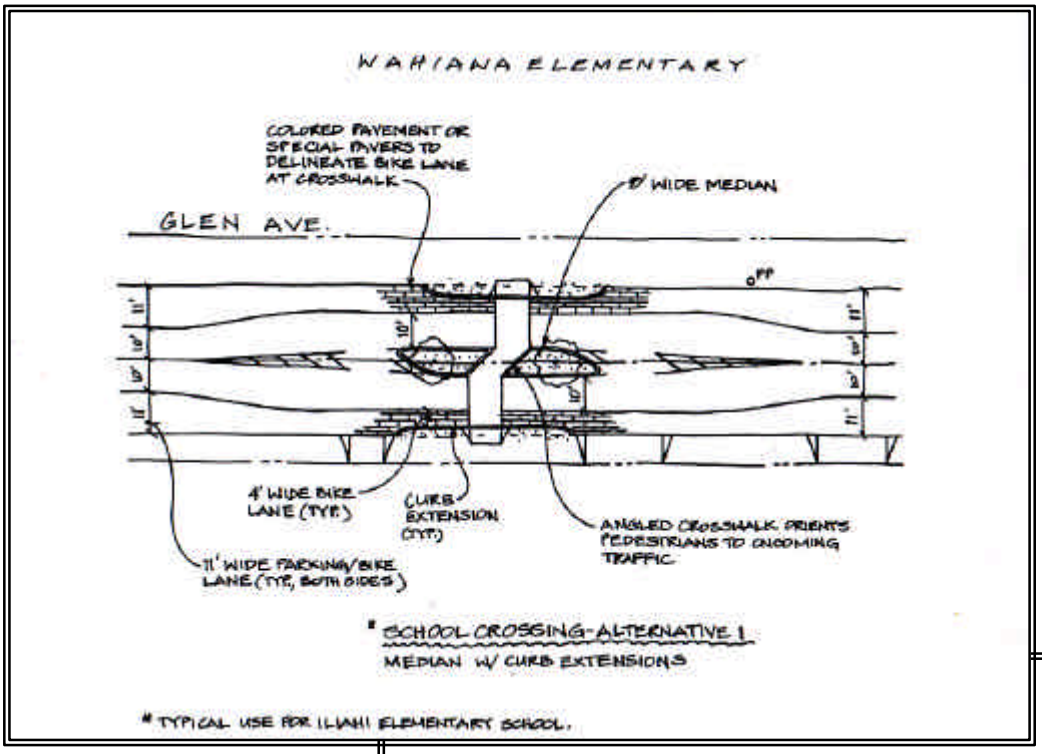
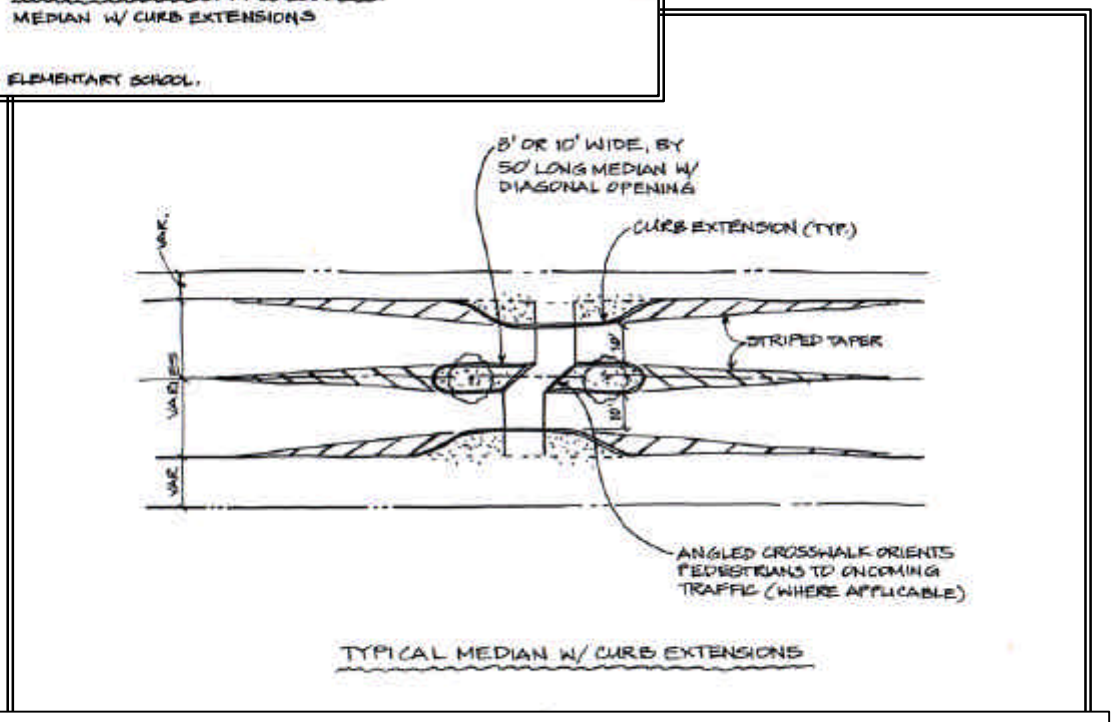
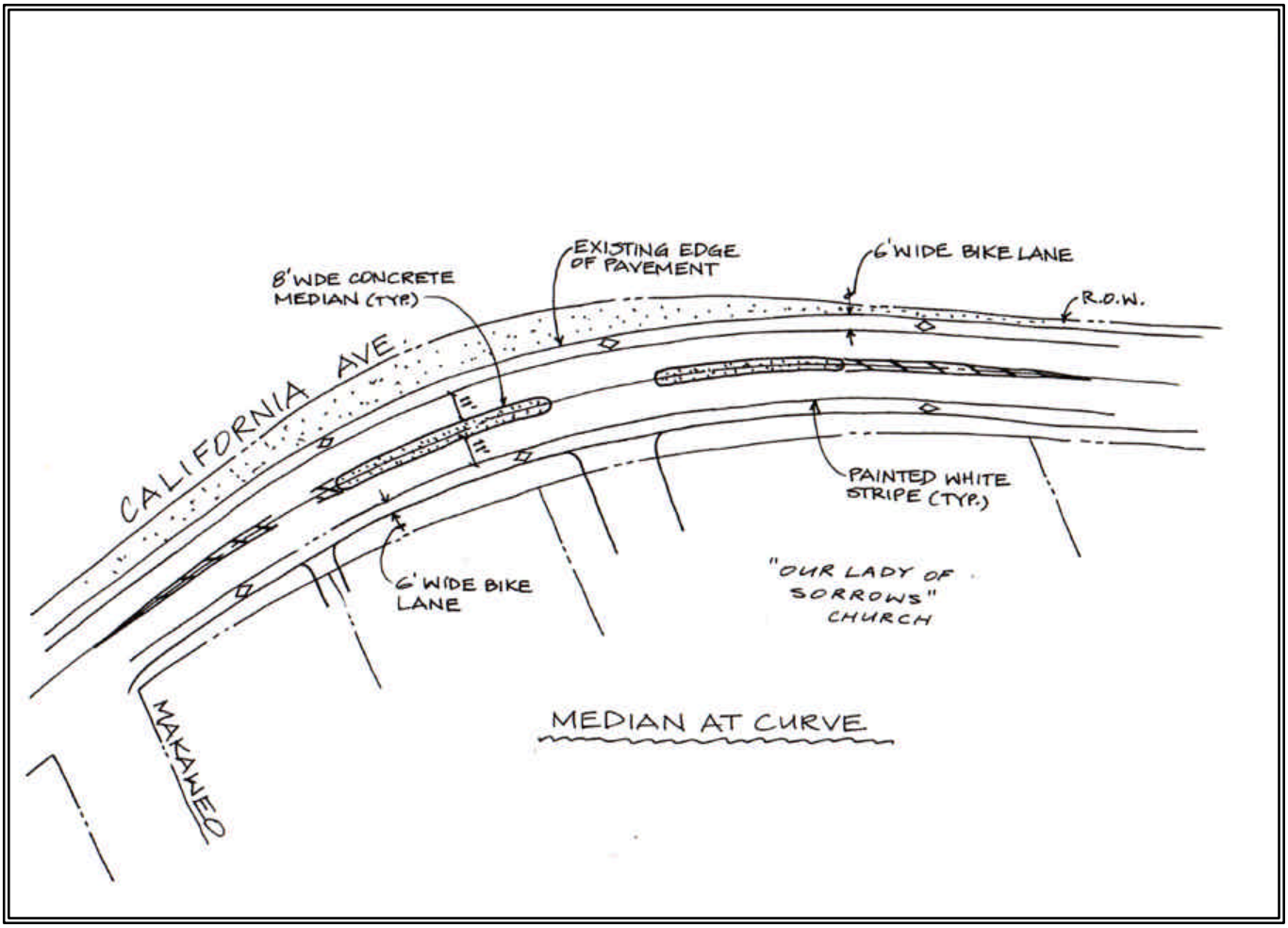




Glen Avenue in front of Wahiawa Elementary School is wide and difficult for young children to cross safely. Residents recommended solutions to slow traffic and make crossing safer in front of the school.

The design team developed two alternative concepts. Either one could be used at Iliahi Elementary (mauka on California) as well. **Alternative 1** is an angled crosswalk with curb extensions and a median. This allows pedestrians to cross one lane of traffic at a time, stopping in the median island. The angled crosswalk forces pedestrians to look directly at oncoming motorists. To fit the median, bike lanes would be slightly narrower at the crossing. This is the recommended alternative as it would provide the most speed reduction and maximize pedestrian safety, while maintaining through bike lanes. **Alternative 2** is also a crosswalk with wider curb extensions, but without the refuge island. The crosswalks should include international-style markings.

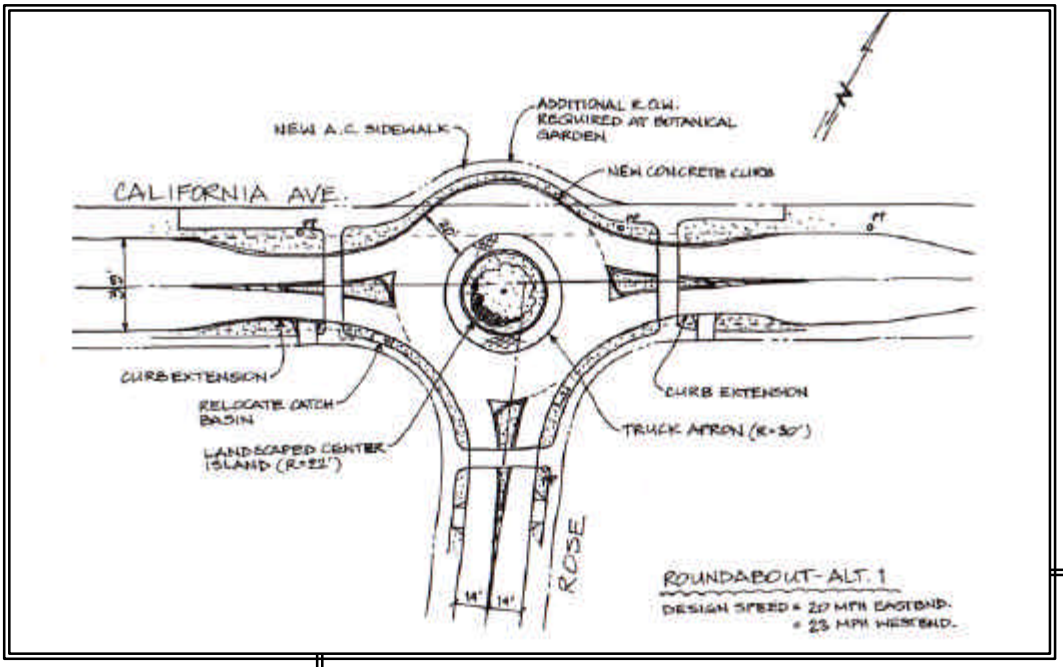


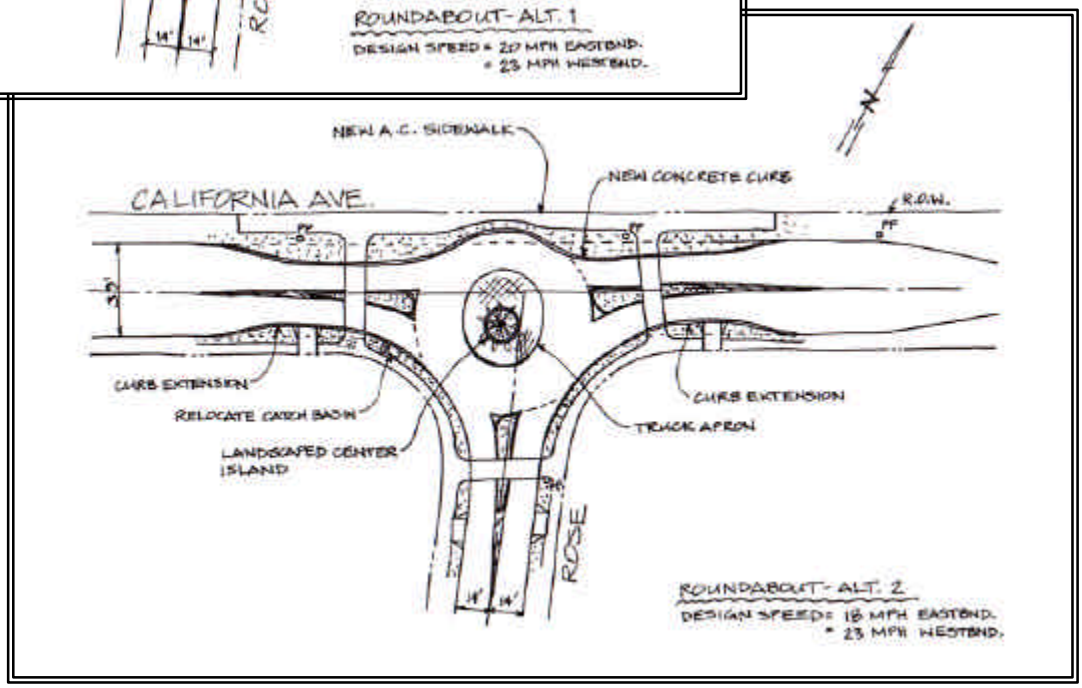
The diagram above shows the curve on California Avenue near the Wahiawa Botanical Garden. During the initial charrette, residents identified this area as having a great deal of speeding. Motorists tend to slingshot around the curve. The pavement is wide enough to allow implementation of effective features with minimal narrowing of the roadway.

California Avenue is used by bikers, joggers, skaters, and motorists. The design of the partial median at the curve in California Avenue provides six-foot wide bike lanes on both sides of the road. These lanes should be pigmented around the curve to better define the travel lanes and create a visual narrowing of the road. Studies show that when motorists perceive a roadway to be narrower they reduce their speed and proceed more cautiously.

As evidenced by the centerline being worn away along this segment of California Avenue, it is common for cars to cross the centerline on curves. The team recommends a six-foot wide median at the widest bend of the curve. The median should taper slightly from the central median portion through the rest of the curve (from 6' to as wide as allowed by the roadway section) – but continue around the curve at either end, to be visible to drivers approaching from either direction. This will prevent drivers from crossing the centerline and provide an attractive, non-traversable landscaped area.

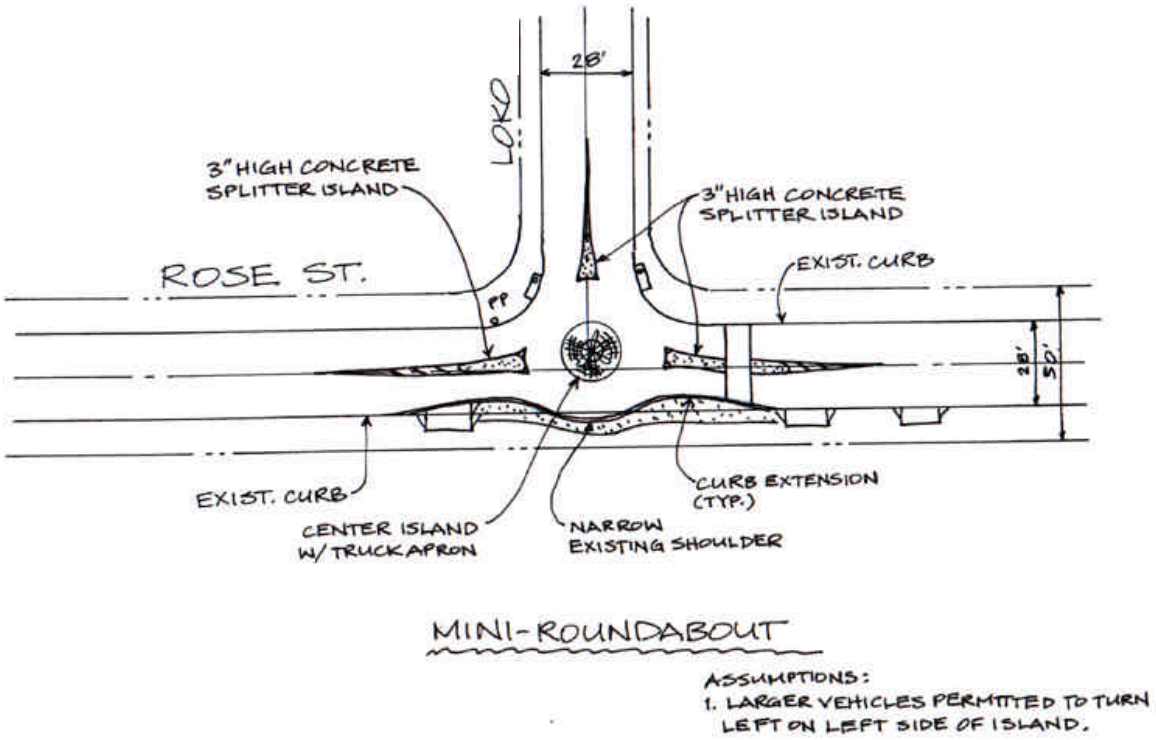
The median should not be used for a crosswalk. While there is a good deal of pedestrian traffic in this area, it is preferable not to allow pedestrians to cross at this curve due to visibility concerns.





The team created two roundabout designs for the corner of California Avenue and Rose Street. The team agreed with residents that a roundabout was the best solution for this location to maintain traffic flow while reducing speeds and alleviating problems for left turners. **Alternative 1** requires taking a small amount of property at the Garden, but the larger center island would be more visible on approach, and calm traffic better. **Alternative 2** requires no property taking, but has a smaller island.

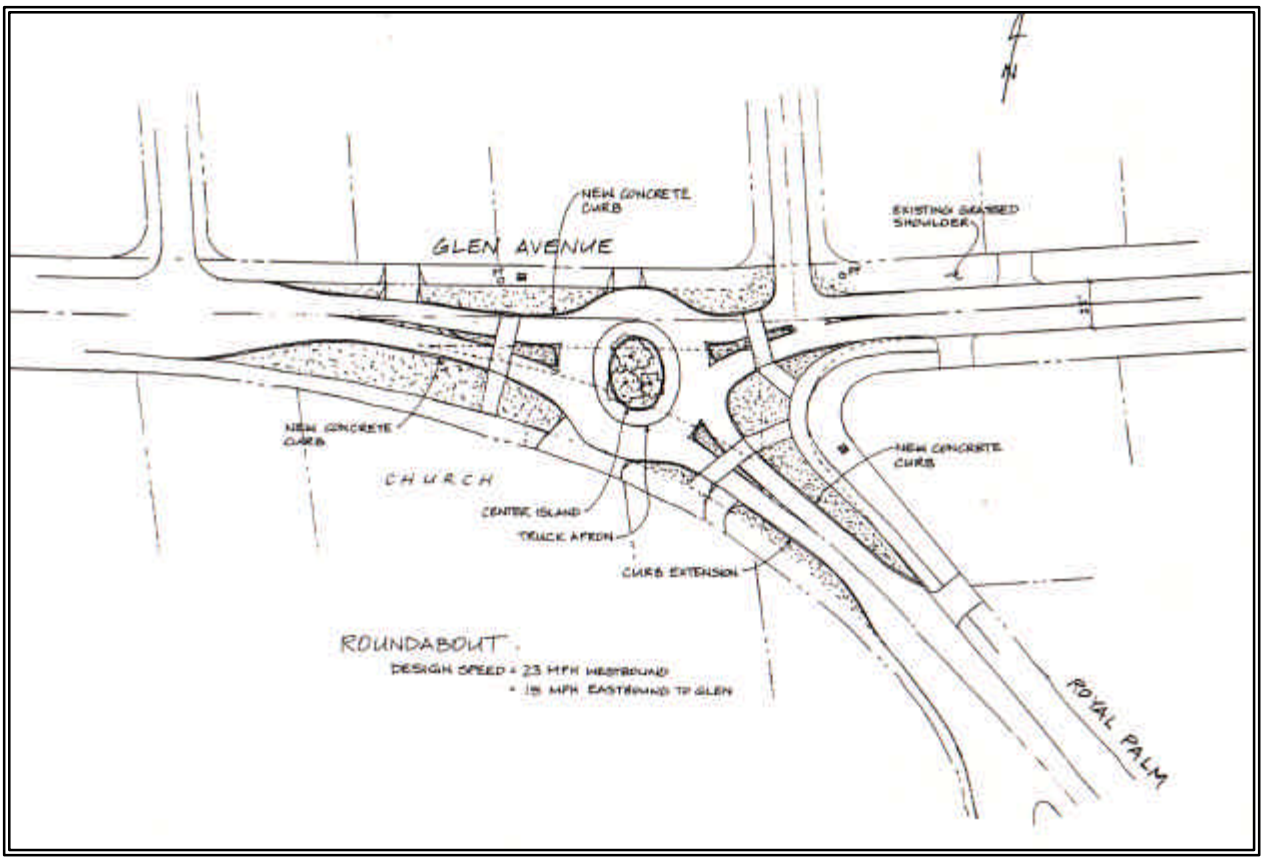
Residents agreed that this intersection was a top priority. They noted that this intersection has been identified to receive a traffic signal. At the second workshop, people indicated a preference for the Alternative 1 roundabout as a long-term solution. However, residents want results in the near future. They understand that the funding for traffic signals and a possible roundabout come from two different sources. The residents requested that DTS staff look into the possibility of transferring the funding for the traffic signals to the construction of a roundabout. If this is not be possible, they would prefer to use the traffic signals money for traffic lights at this intersection, and to use the traffic calming funds for a different location.



One of the devices residents suggested frequently was the use of roundabouts or mini-circles. These devices slow the speed of vehicles by deflecting traffic around a center island and because the center island makes the road appear to end ahead of approaching drivers. If a motorist cannot see clearly around an object, they are likely to slow down.

Rose Street is a long, straight roadway, which drivers readily speed on because sightlines are excellent. The mini-circle at the corner of Loko and Rose would break up this view and cause motorists to slow down. Loko Drive was chosen because it is a through street, which connects to several smaller residential roads in the area.

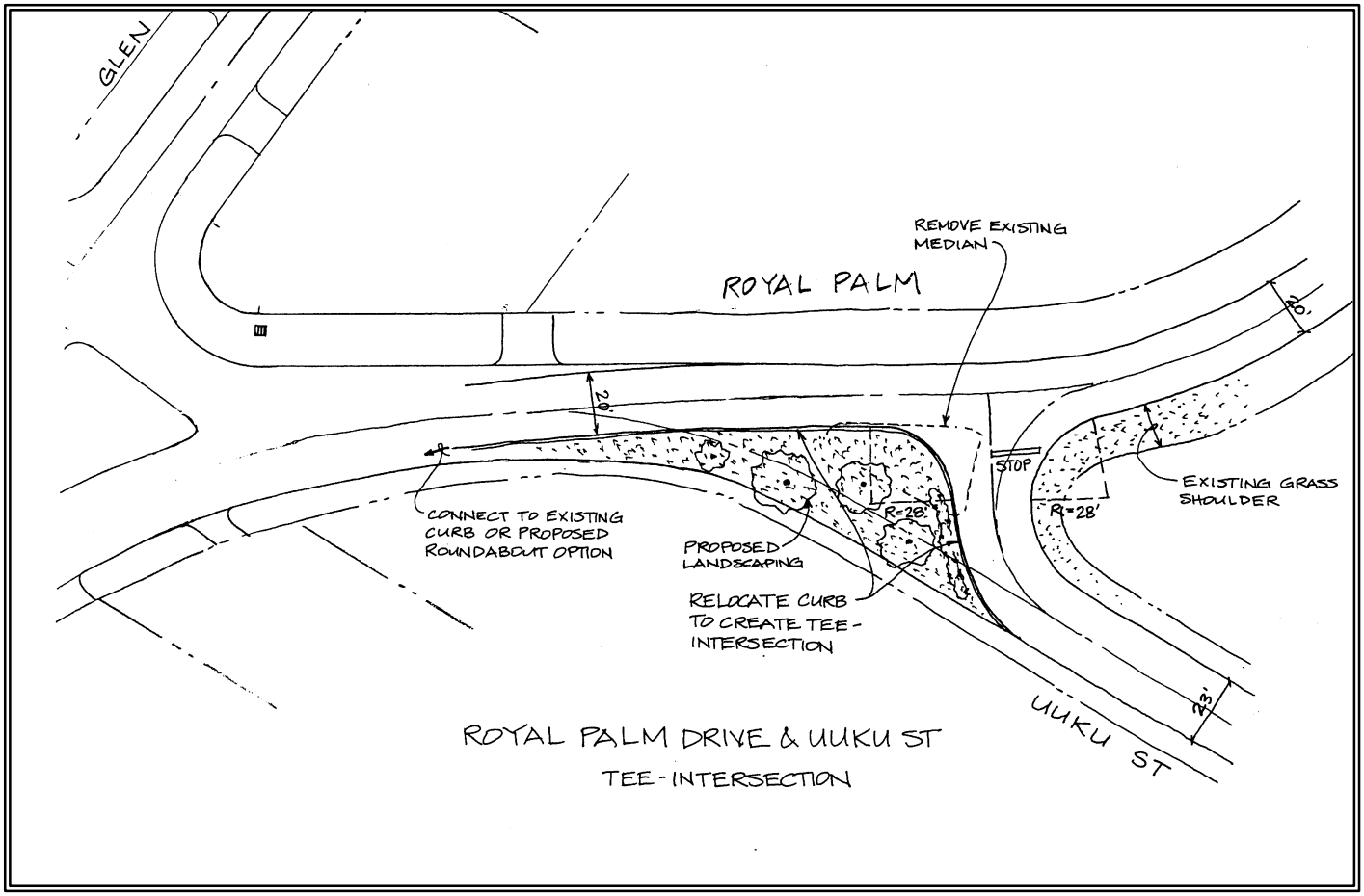
The center of the mini-circle could again be used for landscaping and beautification; the taller the landscaping the better. It is best if motorists can see the mini-circle from a distance. As soon as motorists recognize that there are trees in the middle of the road, they begin slowing.



Glen Avenue and Royal Palm Drive meet at a 'Y' intersection. Sightlines are limited (over the shoulder coming downhill - from the right /east above)), and there is a tendency to speed through the intersection. Existing pedestrian crossings are not clear and well protected.

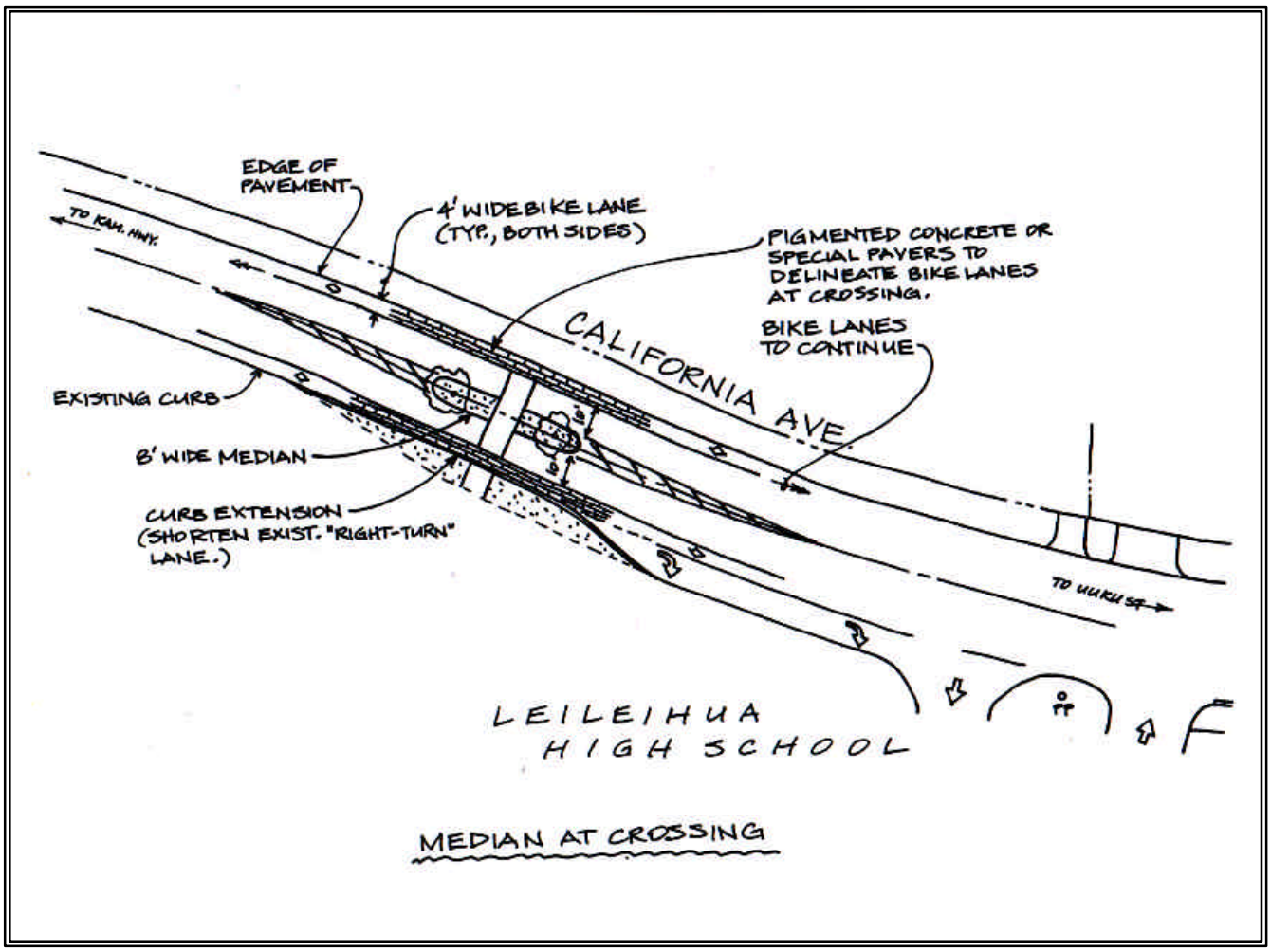
Residents report this intersection has not been as problematic as other areas in the neighborhood and said it was a lower priority to be fixed. However, they wanted to be sure this design was kept on record for the future when funding is available to implement a second round of devices.

The design team was able to fit a large roundabout into the intersection of Glen and Royal Palm. In several areas this would dramatically decrease the amount of pavement, which could be substituted for grass or other plantings. The roundabout would allow for the movement of all types of vehicles. Several driveways at the location would also be accommodated. Traffic would slow dramatically at this intersection, yet there would be less queuing to make turns onto Glen Avenue because traffic would flow more smoothly. Pedestrian crossings would be clearly marked and lanes separated by splitter islands. The crossing distance would be shorter and traffic slowed to a point where it would be more comfortable for motorists to stop for pedestrians. Pedestrians would easily find safe gaps in traffic, as they would only need to cross one lane at a time.



The intersection of Royal Palm Drive and Uuku Street is just up the street from the Glen Avenue/Royal Palm drive intersection (see map pp. 11). The Uuku Street corner has the same type of broad 'Y' intersection. The roads do not line up properly so the pavement was installed excessively wide. The result is a poorly defined traffic pattern and an increase in pedestrian crossing distances.

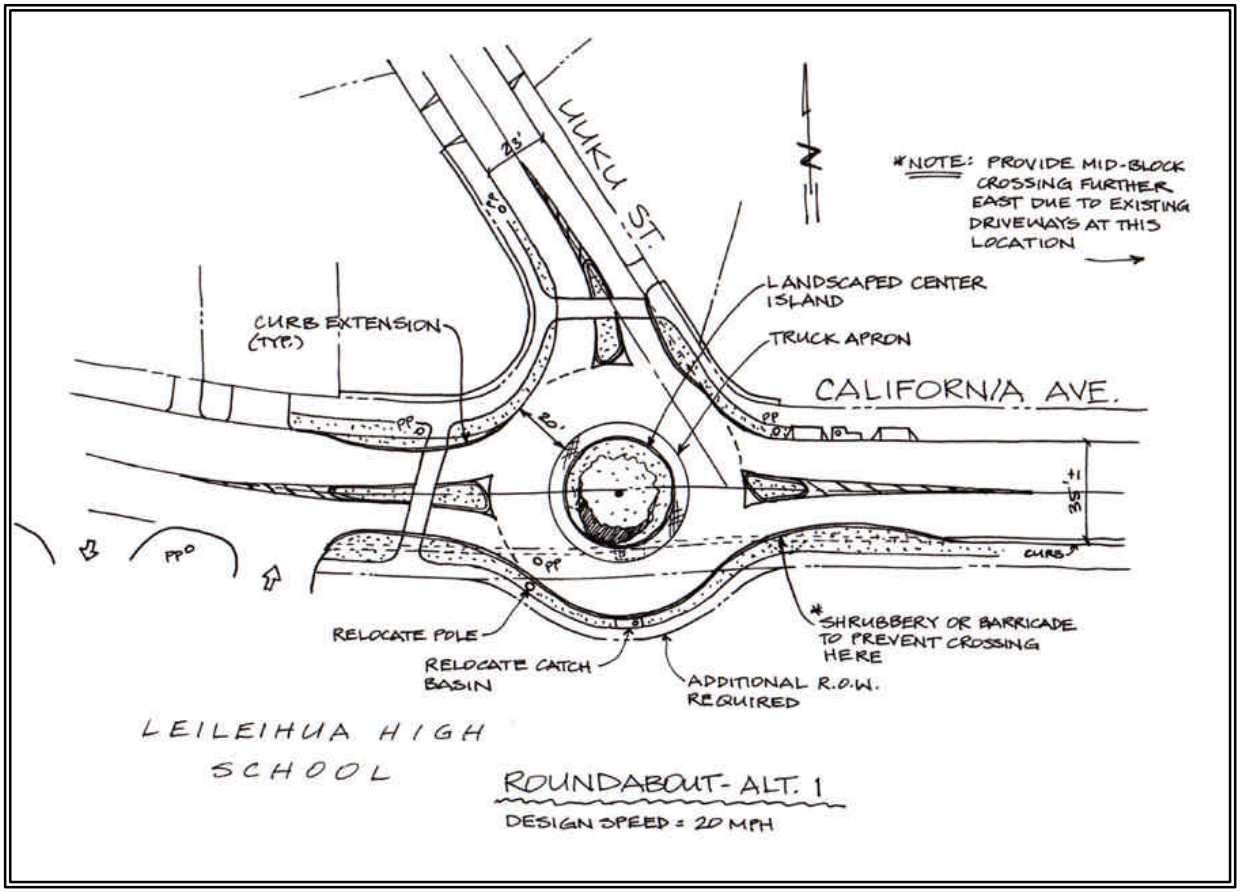
The design team recommends realigning Uuku Street to make a Tee intersection with Royal Palm Drive. This will reduce confusion for both motorists and pedestrians. It could also create an opportunity for an attractive pocket park – a small landscaped area, potentially with seating for neighborhood residents out for a stroll.

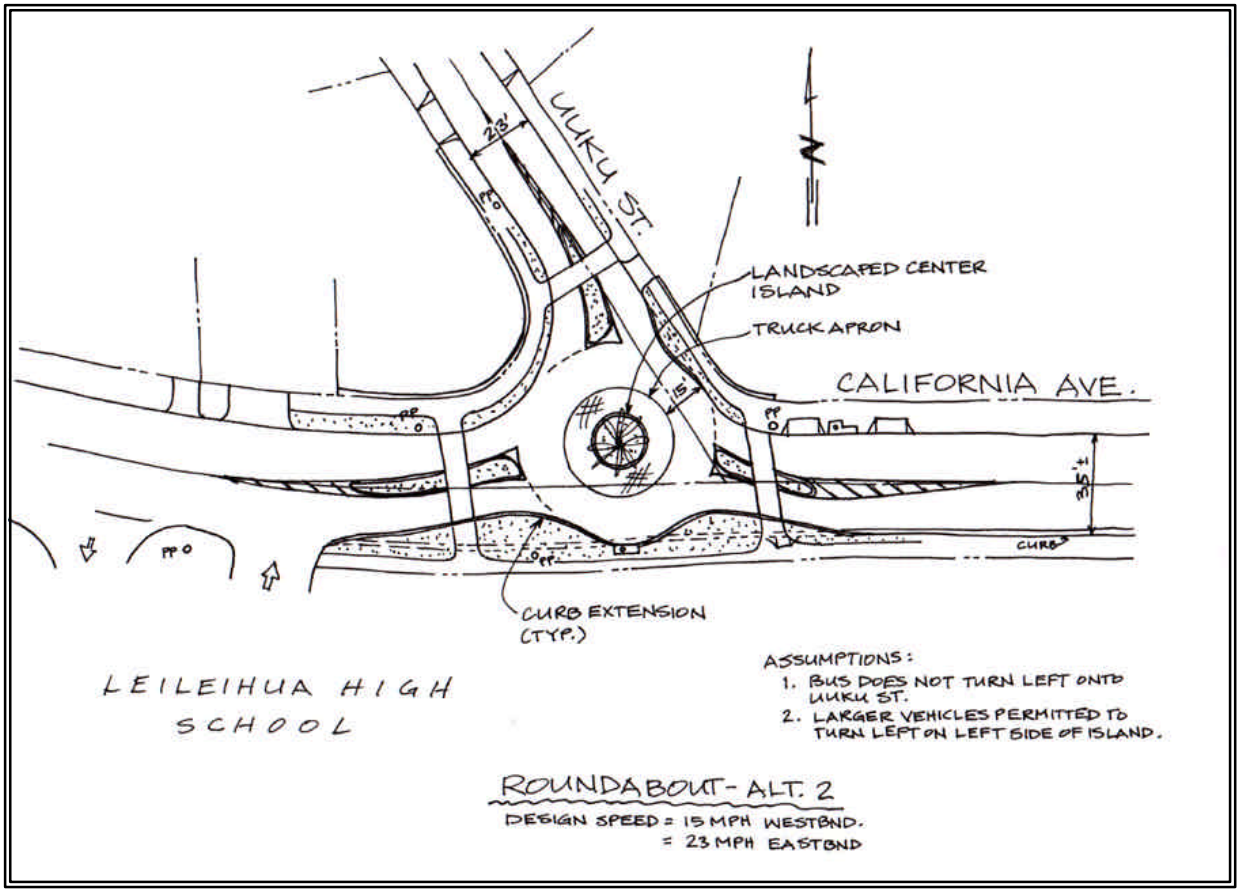


Residents identified California Avenue near the driveway entrance to Leilehua High School as an area of concern. The design team recommended a raised median island, as shown above, with a crosswalk and curb extensions to both slow traffic and aid pedestrian crossing. The crosswalk would have international-style markings.

On the following page are two alternatives for the intersection of Uuku Street and California Avenue. Residents identified this intersection as a high priority area. There is a good deal of traffic both before and after school hours. The roundabout design here will work well because it can increase traffic flow while maintaining calmer speeds.

Roundabout Alternative 1 requires taking a small section of the school property to appropriately dimension the roundabout to handle all types of vehicles. **Alternative 2** does not need to take any property, but buses and tractor-trailers would not be able to turn left onto Uuku under this scenario. Residents indicated a preference for the first design.


UUKU ST.
*NOTE: PROVIDE MID-BLOCK CROSSING FURTHER EAST DUE TO EXISTING DRIVEWAYS AT THIS LOCATION
LANDSCAPED CENTER ISLAND
TRUCK APRON
CURB EXTENSION (TYP.)
CALIFORNIA AVE.
RELOCATE POLE
RELOCATE CATCH BASIN
*SHRUBBERY OR BARRICADE TO PREVENT CROSSING HERE
ADDITIONAL R.O.W. REQUIRED
LEILEIHUA HIGH SCHOOL
ROUNDABOUT- ALT. 1
DESIGN SPEED = 20 MPH


UUKU ST.
LANDSCAPED CENTER ISLAND
TRUCK APRON
CALIFORNIA AVE.
CURB EXTENSION (TYP.)
LEILEIHUA HIGH SCHOOL
ASSUMPTIONS:
1. BUS DOES NOT TURN LEFT ONTO UUKU ST.
2. LARGER VEHICLES PERMITTED TO TURN LEFT ON LEFT SIDE OF ISLAND.
ROUNDABOUT- ALT. 2
DESIGN SPEED = 15 MPH WESTBND.
= 23 MPH EASTBND

FOLLOW-UP WORKSHOP

The second neighborhood meeting was held on April 15, 2000. The purpose of this workshop was to present the designs the Traffic Calming Team had come up with using the input from the February 19 charrette. Nineteen residents turned out to review the proposed designs. Several good comments were made and the Traffic Calming Team responded as follows:

Q: How can semi-tractor trailers make it through roundabouts?

A: They can always go straight through. If they need to make a left turn they can usually go across the nose of a mini-circle. In the roundabout the apron will allow nearly all vehicles to make all turning movements – as noted in some of the design alternatives.

Q: How much training does it take the first time motorist to learn to use a roundabout?

A: Most of the learning occurs in the first six weeks it opens. The Department of Transportation Services has produced a video; you may have seen the commercial on TV over the last few months. This video is directed towards areas slated for roundabouts. We have applied for funding to air the commercial each time a new roundabout opens.

Q: What have other communities done? How did they select priority treatments?

A: In both Manoa and Palolo, which have a similar geographic layout to Wahiawa, the groups felt it would be most effective to start near the bottom of the valley and work their way up. They identified key devices near schools at the lower end of the valley and agreed on four treatments they liked best and prioritized them for installation.

Q: Who will take care of the landscaping in the devices?

A: Area neighborhood groups and organizations will need to adopt the treatments to ensure their regular care. Bushes need to be regularly trimmed, so it is best to put in landscaping that requires little maintenance in terms of inhibiting motorists' visibility. If you had a choice of landscaping, what would you choose?

1. No greenery; concrete only.
2. Moderate greenery and landscaping.
3. Ultra supreme landscaping that would require higher maintenance.

Response: "Do you know who you're talking to? This is Wahiawa, where we have the most beautiful Botanical Gardens on the island. Several people in the neighborhood have a great deal of native horticultural expertise. We want the best!"

Q: Our Vision Team asked for guardrails. Can we take the guardrail money and put it toward traffic calming?

A: The city has done that type of transfer before. If you decide you would prefer to have traffic calming features, ask your Vision Team to suggest reallocating the funding.

Summary

The primary objectives of this process were to: 1) identify issues and concerns, 2) come up with workable solutions, and 3) most importantly, have the residents and board members develop a sense of ownership and commitment to solve the problems that affect their safety, property values and quality of life. This is a citizen's hands-on program, working with government officials. Citizen input is essential to its success.

Wahiawa residents at the second workshop agreed on a prioritized list of the first four projects to be completed in their neighborhood. These intersections need the most attention, and have designs the community wants implemented.

Implementation Priorities

1. Roundabout at California Avenue and Rose
2. Roundabout at Uuku St. and California Ave. across from Leilehua High School.
3. Curb extensions and median crosswalk on Glen Ave. at Wahiawa Elementary School
4. Median crosswalk & bike lanes - California Avenue, south of the High School entrance.

Next Steps

The process used up to this point has led to consensus building, workable solutions, and an effective partnership between the county and the neighborhood. The following additional steps are recommended. Following these steps would ensure that issues and concerns will be properly addressed, costs minimized, and results will have maximum benefit. If ownership of the problems is still weak or lacking, stay on track. The following steps are vital.

(1) Form a neighborhood Transportation Task Team. After the follow-up workshop several members of the community volunteered to serve on such a Team. Cliff Jenkins has done a good deal of work on this project already and is a good contact for the Transportation Task Team.

The team should consist of 6-12 members who will pledge to meet regularly to help refine the plan and work through implementation strategies with city staff.

(2) The area neighborhood board or the transportation task team can also survey residents (door to door) to share copies of this report, and to gain added insight and support. Wahiawa appears to have a strong sense of community. For this reason other effective means to continue building consensus might be to conduct an Open House at an area residence, hold a block party or other event, etc.

(3) To see immediate visible changes, residents should begin by setting a good example when driving in the neighborhood. Wahiawa has mostly two-lane roads so motorists can only drive as fast as the prudent driver. Drive the speed limit and those behind you will be forced to do the same!

(4) Once a construction budget is allocated, schedule final engineering designs and construction of improvements.

(5) Several of the recommendations included new landscaping features. The Transportation Task Team should work with area residents and businesses to determine who will care for the new treatments.